Introduction

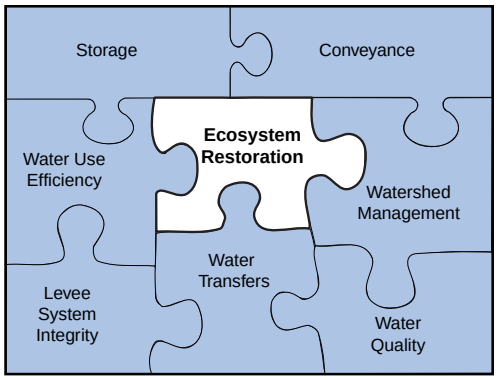
The San Francisco Bay/San Joaquin Delta Estuary (Bay-Delta) is the largest estuary on the West Coast. It consists of a maze of tributaries, sloughs, and islands and is a haven for plants and wildlife—supporting more than 750 plant and animal species. Although all agree on its importance for both habitat and as a reliable source of water, few have agreed on how to manage and protect this valuable resource.

For decades, the Bay-Delta has been the focus of competing economic, ecological, urban, and agricultural interests. These conflicting demands have resulted in declining wildlife habitat, native plant and animal species becoming threatened with extinction, the degradation of the Delta as a reliable source of high quality water, and a Delta levee system faced with a high risk of failure. Even though environmental, urban, and agricultural interests have recognized the Delta as a critical resource, they have been unable to agree on appropriate management of the Delta resources.

Seeking solutions to the resource problems in the Bay-Delta, State and Federal agencies signed a Framework Agreement in June of 1994 that provided increased coordination and communication for environmental protection and water supply dependability. The Framework Agreement laid the foundation for the Bay-Delta Accord and the CALFED Bay-Delta Program. The Bay-Delta Accord detailed interim measures for both environmental protection and regulatory stability in the Bay-Delta and provided the framework under which ecosystem restoration of Bay-Delta resources was allowed to move forward.

The Bay-Delta includes over 738,000 acres in five counties and is critical to California's economy, supplies drinking water for two-thirds of all Californians and irrigation water for over 7 million acres of the most highly productive agricultural land in the world.

The CALFED Program

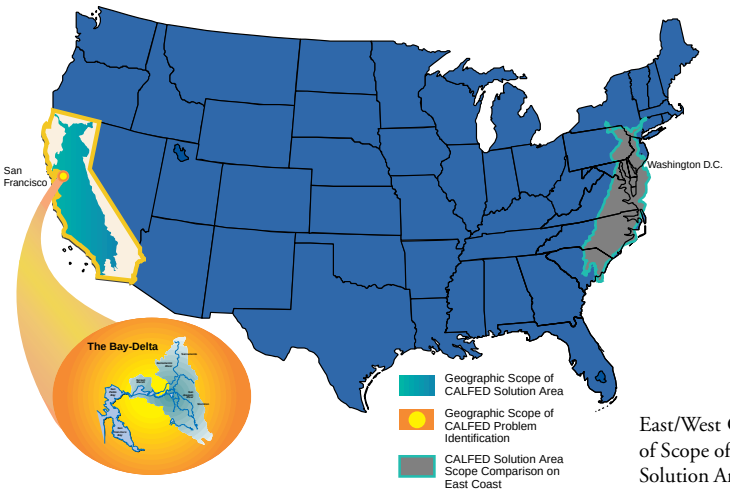


The purpose of the Program is to develop and implement a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system.

The CALFED Program is a cooperative, interagency effort involving 15 State and Federal agencies with management and regulatory responsibilities in the Bay-Delta. Bay-Delta stakeholders also contribute to the Program design and to the problem-solving/decision-making process. Public participation and input have been essential throughout the process. This input is received through the Bay-Delta Advisory Council (BDAC), public participation in workshops, scoping meetings, comment letters, and other public outreach efforts.

CALFED is addressing problems of the Bay-Delta system within four critical resource categories: ecosystem health, water quality, water supply reliability, and levee system integrity. Important physical, ecological, and socioeconomic linkages exist between the problems and possible solutions in each of these categories. Accordingly, a solution to problems in one resource category cannot be pursued without addressing issues in the other resource categories.

Throughout the development of the Program, CALFED has evaluated many potential alternatives. These alternatives are programmatic in nature, defining broad approaches to meet CALFED purposes. Each of the alternatives evaluated in the Revised Draft Programmatic Environmental Impact Statement/Environmental Impact Report contains eight program elements. These include ecosystem restoration, water quality, levee system integrity, water use efficiency, water transfers, watershed management, storage, and conveyance. When implemented, these program elements will result in overall improvement in the Bay-Delta System both ecologically and as a reliable source of fresh water.



East/West Comparison of Scope of CALFED Solution Area

Ecosystem Restoration- A New Approach

Traditional management of ecological resources has focused upon the needs of individual species. CALFED is relying on an integrated ecosystem management approach that attempts to recover and protect multiple species by restoring the natural physical and ecological processes that help create and maintain diverse and healthy habitats.

Many of the numerous plant and animal species that rely on the Bay-Delta ecosystem are extinct, listed as endangered or threatened, or are experiencing declines in population abundance or geographic distribution. Species declines indicate a much broader problem of deteriorating ecological health in the Bay-Delta.

The benefits of restoring the environment are far reaching, and provide improvements in other areas. The result is not only traditional environmental restoration, but improvements in less obvious areas including improved watershed management, better water quality, and increased water supply reliability for California's citizens and economy. The CALFED Program is a cooperative effort between State and Federal agencies, stakeholders and the public. To date, CALFED has received more than 800 ecosystem restoration proposals and has approved 240 projects for a total of approximately $254 million. Funding of restoration projects is provided through State, Federal and stakeholder funds. The following discussions attempt to characterize the unprecedented breadth and scope of the CALFED Ecosystem Restoration Program. The projects which are profiled here are representative of the broad concepts and improvements the CALFED Ecosystem Restoration Program is striving to achieve.

Fish Protection - Major and Small Screening Programs

Water is a critical component of California's economy. Diverted water provides irrigation for more than 200 different crops, drinking water for two-thirds of Californians, and water for refuges and other wetland habitat areas.

Fish and aquatic organisms are lost when water is diverted from the system. In most cases, entrained organisms do not survive. Some diversions have screens that exclude most juvenile and adult fish, however, eggs and larval fish, invertebrates, planktonic plants, organic debris and dissolved nutrients are lost to diversions. The conflict between the loss of important environmental components and the need to divert water for beneficial uses is an important issue for the CALFED Program.

Because of the magnitude and significance of this conflict and its potential to adversely affect both California's natural resources, and its economy, the CALFED agencies are working comprehensively and aggressively to reduce the adverse effects of water diversions. More than $38 million for 42 projects has been provided for the following activities, focused on reducing the adverse environmental effects of water diversions:

• Research to allow better understanding of the effects of entrainment and how it can best be managed.

• Relocation and consolidation of water diversions.

• Feasibility, engineering and installation of fish screens on major water diversions. When all the projects approved by CALFED have been installed, nearly 75 percent of the diverted water on the Sacramento River north of Colusa, will be screened.

• Installation of fish screens on small water diversions including funding to Natural Resource Conservation Service's existing voluntary small fish screen program.

Cosumnes River Preserve Forming Lasting Partnerships

As the last free-flowing river on the western slope of the Sierra Nevada, the Cosumnes River watershed provides unique opportunities for preservation of healthy ecosystems, research and restoration.

Only a fraction of the Central Valley's original environment remains. The Cosumnes River, its watershed and its floodplain encompass an ecosystem of great biological importance. This area includes seasonal and permanent wetlands, riparian forests, seasonal vernal pools, grasslands, and valley oak woodlands. The Cosumnes River Preserve is one of the largest and best examples of the Central Valley as it once was.

The Cosumnes River Preserve is a showcase for partnerships. Since 1984, the Preserve has evolved into one of California's most prominent conservation projects. More than 35,000 acres of riverside habitat and agricultural land along the lower floodplain of the Cosumnes has been protected. The Cosumnes River Preserve is saving crucial habitat on a large scale within the rapidly urbanizing areas of Sacramento and Stockton. The Preserve provides a multifaceted program combining land acquisition, land use planning, compatible economic development, public and private partnerships, habitat restoration, and community outreach and education.

Much of the Preserve is farmed. This allows continuation of environmentally sensitive grazing and wildlife-friendly farming for commercial purposes and for wildlife habitat and use. Projects like the Cosumnes River Preserve protect agricultural lands from development, support rural communities, and provide open space and buffers to nearby urban areas.

Restoration of natural floodplains, such as those found on the Cosumnes River Preserve, are an important step toward a healthy Bay-Delta ecosystem.